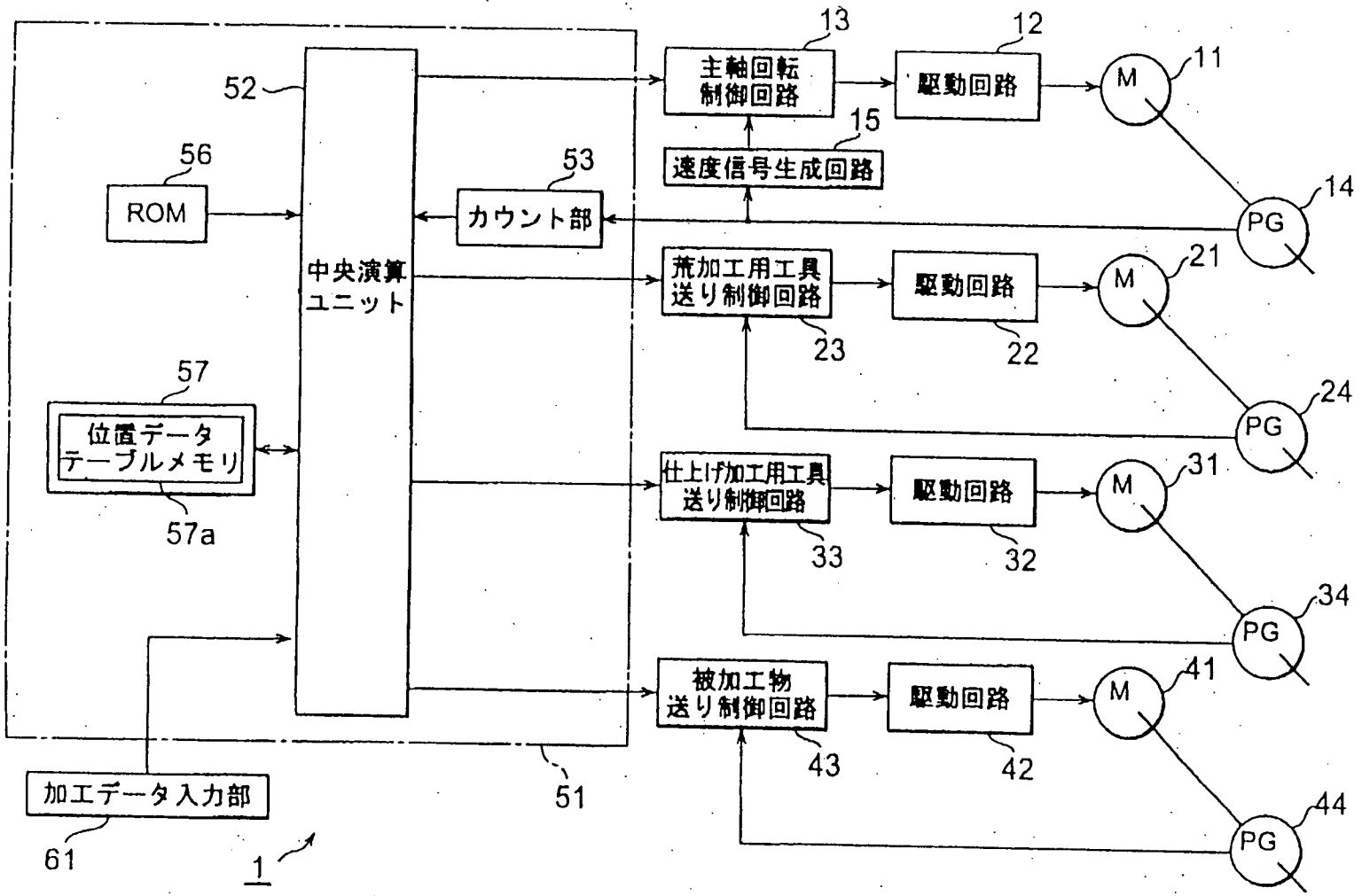
FIG. 1



12, 22, 32, 42: DRIVING CIRCUIT
52: CENTRAL PROCESSING UNIT
13: MAIN SHAFT ROTATION CONTROL CIRCUIT
15: SPEED SIGNAL GENERATION CIRCUIT
23: ROUGHING TOOL FEED CONTROL CIRCUIT
33: FINISHING TOOL FEED CONTROL CIRCUIT
43: WORKING PIECE FEED CONTROL CIRCUIT
53: COUNT SECTION
56: ROM
57, 57a: POSITION DATA TABLE MEMORY
61: PROCESSING DATA INPUT SECTION

FIG. 2A

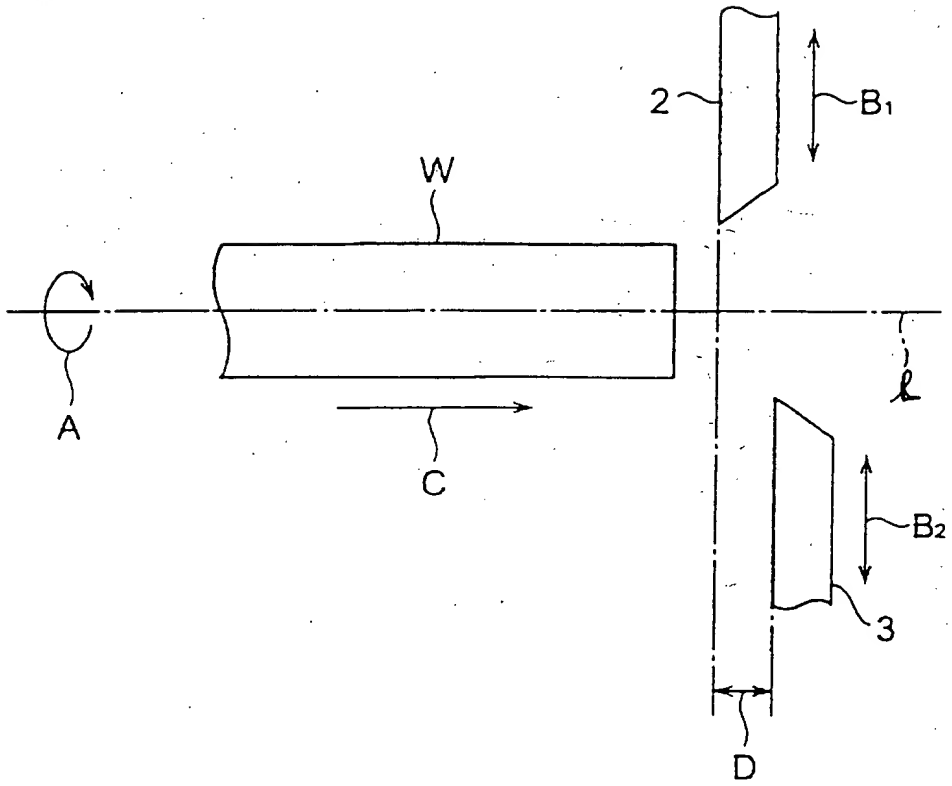


FIG. 2B

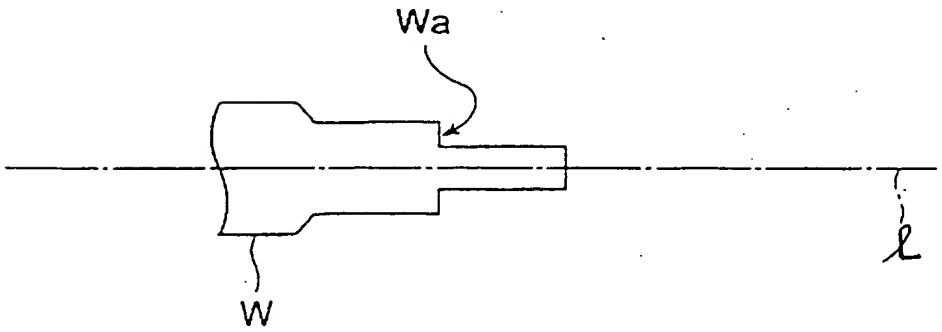
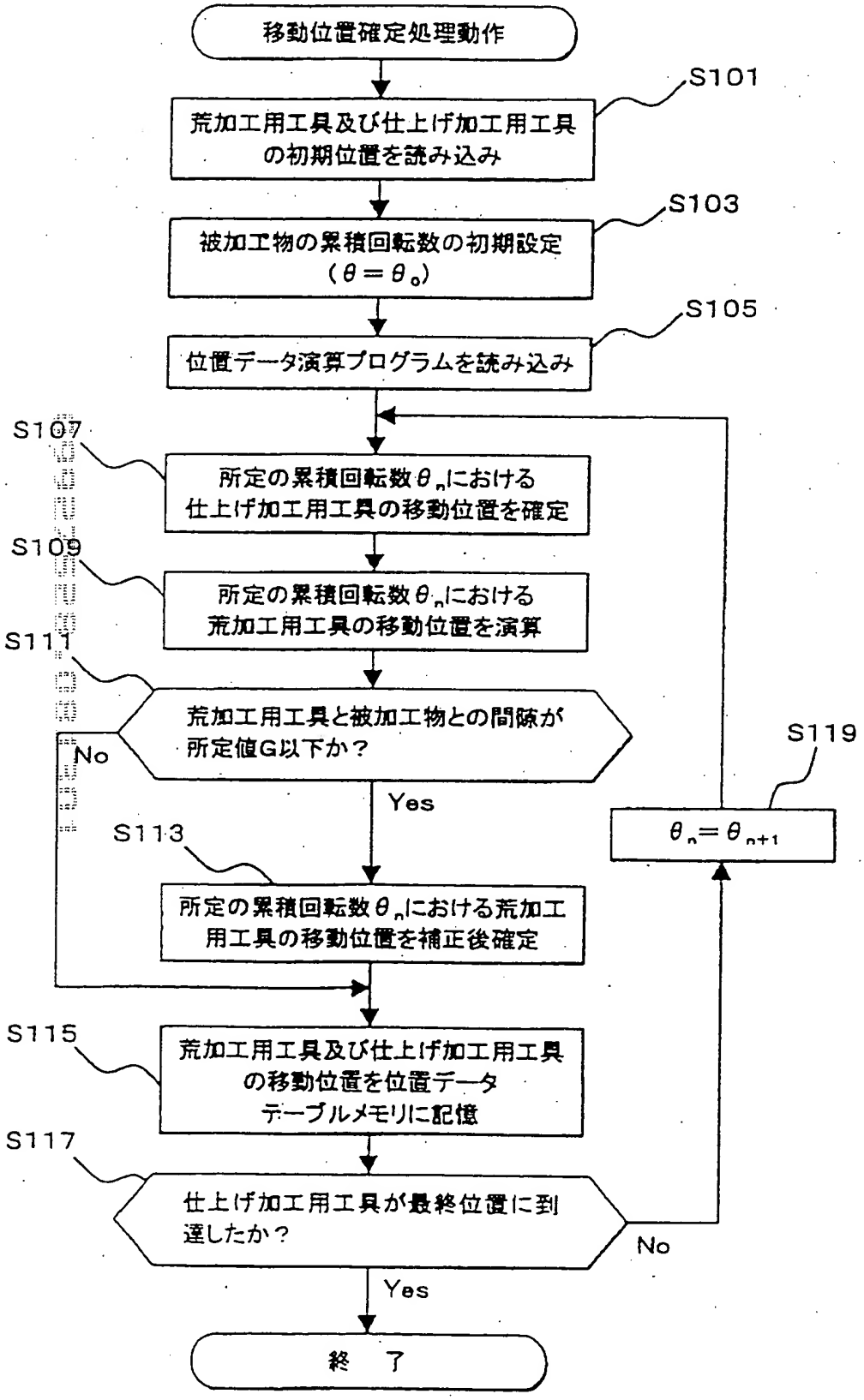


FIG. 3



S101: READ IN INITIAL POSITIONS OF ROUGHING TOOL AND FINISHING TOOL

S103: INITIALIZE SETTING OF ACCUMULATION NUMBER OF ROTATION OF WORK PIECE ($\theta = \theta_0$)

S105: READ IN POSITION DATA CALCULATION PROGRAM

S107: SETTLE MOVEMENT POSITION OF FINISHING TOOL IN A PREDETERMINED ACCUMULATION NUMBER OF ROTATION θ_n

S109: CALCULATE MOVEMENT POSITION OF ROUGHING TOOL IN A PREDETERMINED ACCUMULATION NUMBER OF ROTATION θ_n

S111: IS GAP BETWEEN ROUGHING TOOL AND WORK PIECE NOT LARGER THAN A PREDETERMINED VALUE G ?

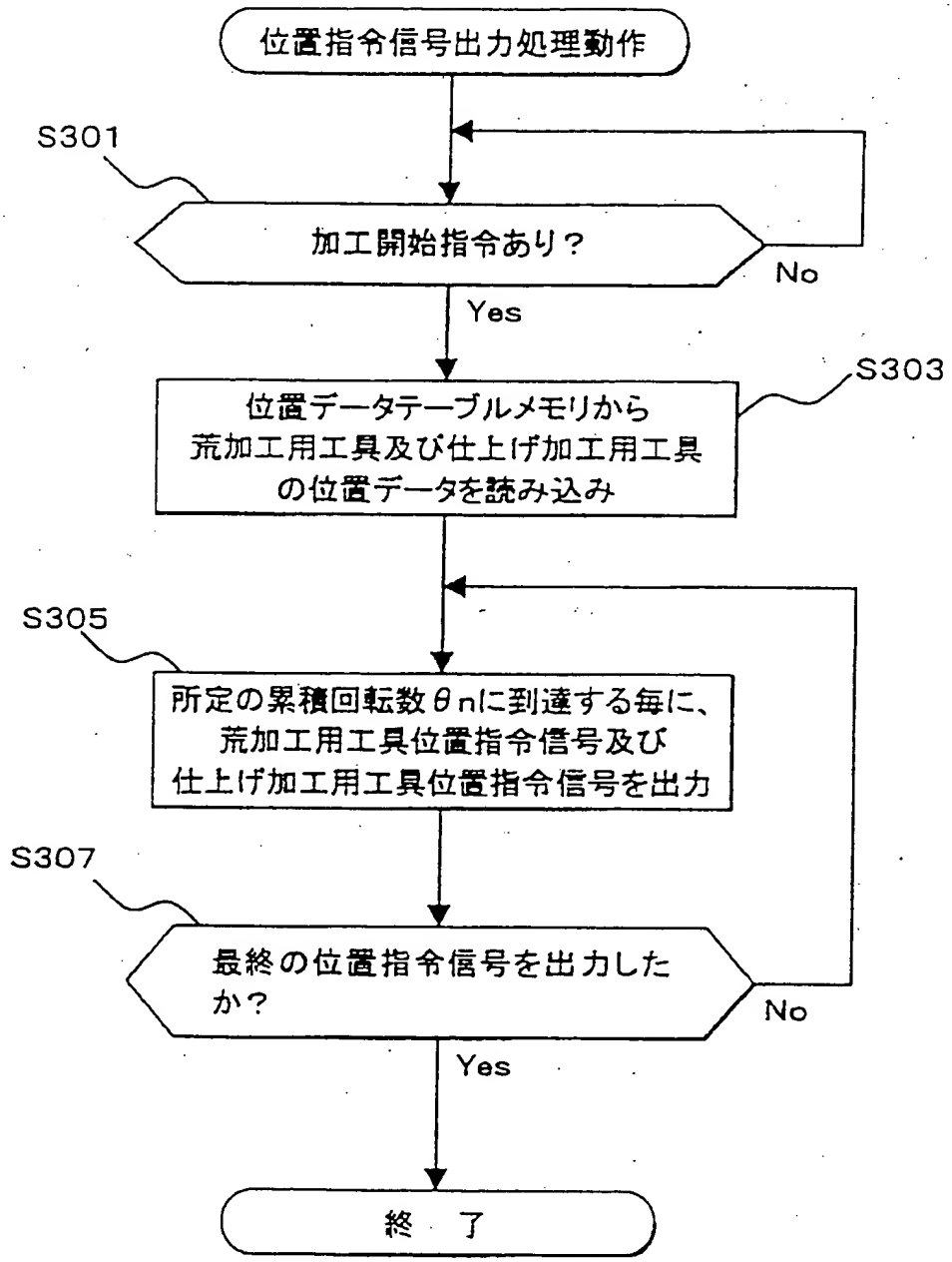
S113: CORRECT AND SETTLE MOVEMENT POSITION OF ROUGHING TOOL IN A PREDETERMINED ACCUMULATION NUMBER OF ROTATION θ_n

S115: STORE MOVEMENT POSITION OF ROUGHING TOOL AND FINISHING TOOL IN POSITION DATA TABLE MEMORY

S117: FINISHING TOOL REACHES FINAL POSITION ?

S119: $\theta_n = \theta_{n+1}$

FIG. 4



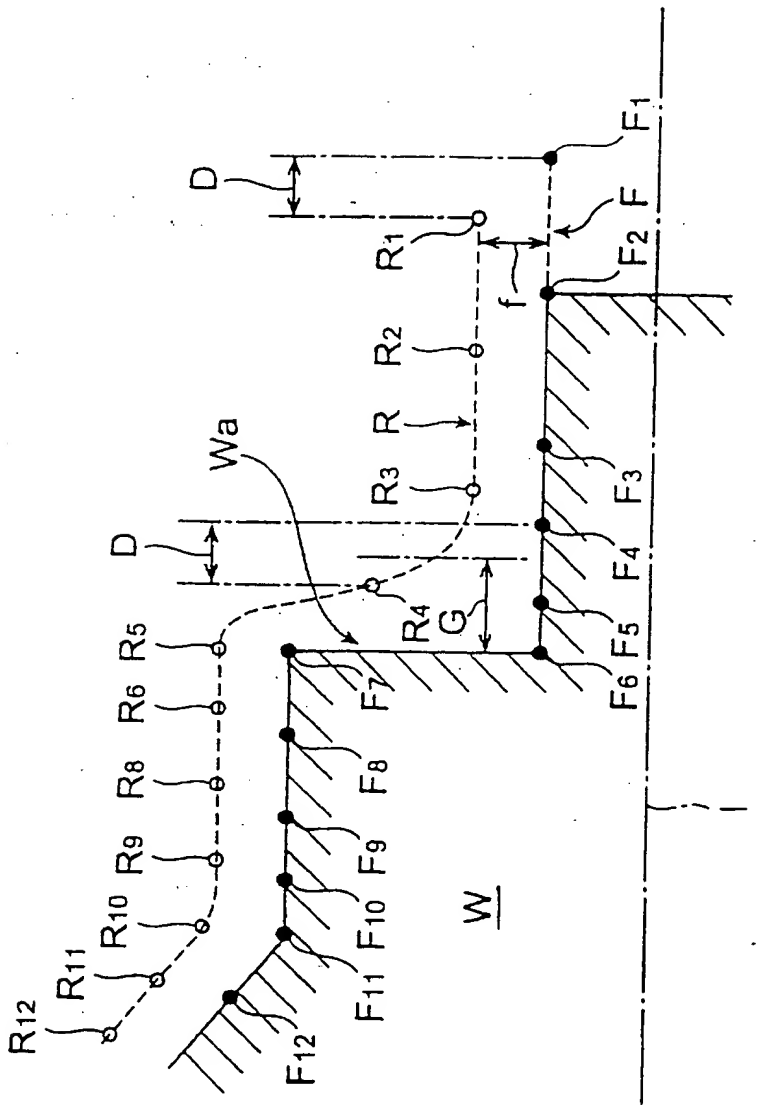
S301: IS THERE PROCESSING START COMMAND ?

S303: READ IN POSITION DATA OF ROUGHING TOOL AND FINISHING TOOL FROM POSITION DATA TABLE MEMORY

S305: OUTPUT ROUGHING TOOL POSITION COMMAND SIGNAL AND FINISHING TOOL POSITION COMMAND SIGNAL EVERY TIME WHEN THE NUMBER OF ROTATION REACHES A PREDETERMINED ACCUMULATION NUMBER OF ROTATION θ_n

S307: IS FINAL POSITION COMMAND SIGNAL OUTPUTTED ?

FIG. 5


D
R1
F1
F
F2
f
R2
R
R3
Wa
F3
D
F4
R4
G
R5
F5
R6
F6
F7
R8
F8
R9
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R10
F10
W
R11
F11
R12
F12
I

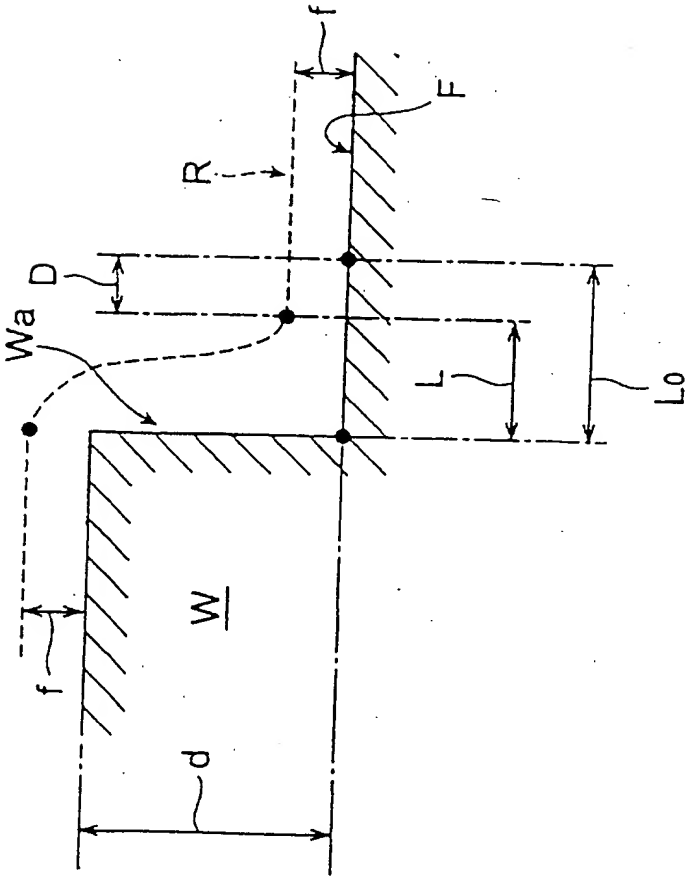
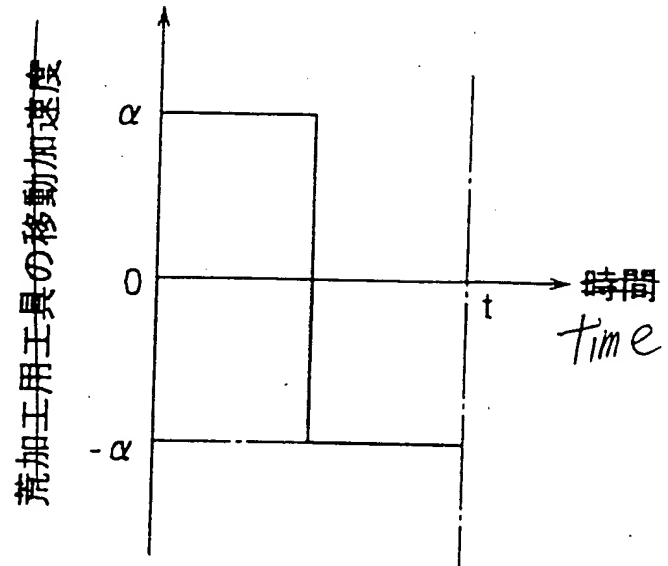


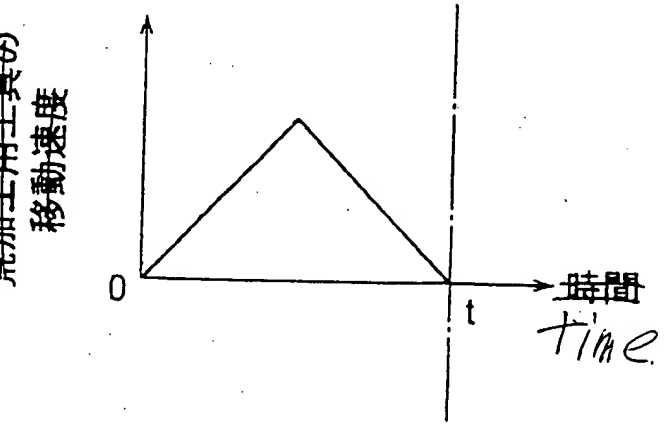
FIG. 6
PRIOR ART

FIG. 7A



movement ac

FIG. 7B



movement speed of roughing tool